

VEHICLE AC GENERATOR THROUGH-BOLT

ABSTRACT

A through-bolt for use with an AC generator has a housing including a drive-end portion and a mounting-end portion. A stator is mountable between the drive-end portions. A rotor is mounted for rotation within the housing. One of the end portions includes a plurality of circumferentially spaced ears having first apertures therein and the other end portion includes a corresponding plurality of circumferentially spaced ears having threaded apertures therein. The through-bolt is inserted through one of the first apertures and received in one of the threaded apertures to bolt the housing ends together against the stator. The through-bolt is subject to bending stress since it does not operate on a solid stack up, regardless of alignment. The through-bolt comprises a head portion, an elongated shank portion, and a threaded portion extending from the elongated shank portion. The shank portion is necked-down adjacent the threaded portion to a diameter sufficiently less than a minor diameter of the threads in the threaded portion such that the resistance of the through-bolt to fatigue failure is increased.